

PATENT

Atty Dkt. No. APPM008465/PPC/ECP/CKIM

IN THE CLAIMS:

Please cancel claims 17-35:

1. (Previously Presented) A method for supplying a fluid to a substrate processing apparatus, the method comprising:
 - measuring a first level in a vessel with a first ultrasonic signal to provide a first volume measurement;
 - delivering at least one chemical component to the vessel;
 - measuring a second level in the vessel with a second ultrasonic signal to provide a second volume measurement;
 - determining the difference in volume between the first volume measurement and the second volume measurement;
 - comparing the difference in volume with a pre-determined value; and
 - discharging the at least one chemical component from the vessel to the substrate processing apparatus.
2. (Original) The method of claim 1, further comprising delivering a catholyte to the vessel prior to measuring the volume in the vessel with the first ultrasonic signal.
3. (Original) The method of claim 2, further comprising purging gas from the vessel prior to measuring the volume in the vessel with the first ultrasonic signal.
4. (Previously Presented) The method of claim 1, wherein the discharging the at least one chemical component from the vessel to the substrate processing apparatus comprises closing a vent, opening a discharge valve, and pressure discharging the at least one chemical component by delivering to the vessel a material selected from the group consisting of an inert gas, water, and an electrolyte composition.

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5. (Original) The method of claim 1, wherein the substrate processing apparatus comprises a plating cell, an unitary plating system platform, or a spin-rinse processing cell.
6. (Original) The method of claim 1, wherein the measuring the level in the vessel with the first ultrasonic signal further comprises measuring the temperature in the vessel.
7. (Original) The method of claim 1, further comprising continuously delivering the at least one chemical component to the vessel and measuring the level in the vessel until the pre-determined value is achieved.
8. (Previously Presented) A method for electroplating at least one layer onto a surface of a substrate surface, the method comprising:
- positioning the substrate in a plating cell on a unitary system platform for a plating technique;
 - supplying an electrolyte composition to the plating cell by supplying an electrolyte and an amount of one or more chemical components, wherein the amount of one or more chemical components are provided by:
 - measuring the first level of a vessel with a first ultrasonic signal to provide a first volume measurement;
 - delivering at least one chemical component to the vessel;
 - measuring a second level in the vessel with a second ultrasonic signal to provide a second volume measurement;
 - determining the difference in volume between the first volume measurement and the second volume measurement;
 - comparing the difference in volume with a pre-determined value; and
 - discharging the one or more chemical components from the vessel to the plating cell; and
 - depositing a conductive material from the electrolyte composition to the surface of the substrate.

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9. (Original) The method of claim 8, further comprising delivering a catholyte to the vessel prior to measuring the volume in the vessel with the first ultrasonic signal.
10. (Original) The method of claim 8, further comprising purging gas from the vessel prior to measuring the volume in the vessel with the first ultrasonic signal.
11. (Previously Presented) The method of claim 8, wherein the discharging the one or more chemical components from the vessel to the substrate processing apparatus comprises closing a vent, opening a discharge valve, and pressure discharging the one or more chemical components by delivering to the vessel a material selected from the group consisting of an inert gas, water, and an electrolyte composition.
12. (Original) The method of claim 8, wherein the substrate processing apparatus comprises a plating cell, an unitary plating system platform, or a spin-rinse processing cell.
13. (Original) The method of claim 8, further comprising rinsing the substrate.
14. (Original) The method of claim 13, further comprising spin drying the substrate.
15. (Original) The method of claim 8, wherein the measuring the level in the vessel with the first ultrasonic signal further comprises measuring the temperature in the vessel.
16. (Original) The method of claim 8, further comprising continuously delivering the at least one chemical component to the vessel and measuring the level in the vessel until the pre-determined value is achieved.

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